

REMARKS/ARGUMENTS

Claims 7-9 are pending herein. Claims 1-6 have been cancelled in favor of new claims 7-9. Applicant respectfully submits that support for new claims 7-9 can be found in the original claims and on pages 4-7 and 9-12 of the original specification, for example, and that no new matter has been added.

1. The objection to the specification is noted, but deemed moot in view of the substitute specification submitted herewith. Accordingly, Applicant respectfully requests that the above objection be reconsidered and withdrawn.

2. The §112, second paragraph rejection of claims 1-6 is noted, but deemed moot in view of the cancellation of claims 1-6 in favor of new claims 7-9 submitted above. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

3. The §112, first paragraph rejection of claims 1-6 is noted, but deemed moot in view of the cancellation of claims 1-6 in favor of new claims 7-9 submitted above. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

4. Claims 1-6 were rejected under §103(a) over EP '108 in view of JP '086, Higa and JP '144. Applicant respectfully submits that this rejection is moot in view of the cancellation of those claims. To the extent that the PTO might attempt to assert this rejection against the new claims submitted above, it is respectfully traversed.

New independent claim 7 recites a method of producing a soap product comprising providing facultative anaerobe effective microorganisms including at least lactic acid bacteria, yeast and photosynthetic bacteria or a fermented material containing facultative anaerobe effective microorganisms including at least lactic acid bacteria, yeast and photosynthetic bacteria, providing a ceramic powder catalyst by

forming a mixture of a clay and a condensed liquid of an antioxidant substance produced by effective microorganisms to form a mixture, aging the mixture and baking the mixture, compounding the effective microorganisms and the ceramic powder catalyst and adding the compounded effective microorganisms and the ceramic powder to a soap product raw material and mixing and performing emulsification and saponification. The ceramic powder catalyst enhances a degree of saponification of the soap product during the production thereof, and after the soap product is introduced into a waste water system, the effective microorganisms provided thereby proliferate in the waste water system to enhance a decomposition rate of the soap product itself as well as a decomposition rate of indigenous pollutants in the waste water system to accelerate water purification. New claims 8 and 9 each depend directly from new independent claim 7.

The “detergent” according to the present invention is actually a soap product - not a waste water treatment product provided as means to treat waste water in treatment systems. Instead, the soap product according to the present invention is provided as an alternative to conventional household soaps/detergents, whereby less is used for household applications, and thus less is loaded into the waste water treatment systems. When the soap product is introduced into the waste water systems, the effective microorganisms contained therein naturally proliferate benign microorganisms in conjunction with the sewage water in which it is discharged. Anaerobic bacteria contained in the proliferated microorganisms coexist and contribute to the production of decomposition enzymes. Because of the concurrent metabolism mechanism, environmental pollution substances in the sewage water are decomposed as the detergent decomposes. In effect, the soap product according to the present invention acts as a purification source in the sewage water, suppresses the proliferation of malign bacteria therein, and reduces the occurrence of soap scum deposits and malodorous substances in sinks, tubs, etc.

The PTO admitted that EP '108 does not disclose or suggest a detergent containing a ceramic powder component including effective microorganisms (EM) (Office Action, page 6, lines 1-2). In an attempt to overcome this deficiency of EP '108, the PTO applied JP '086 and asserted that it would then have been obvious to one skilled in the art to combine the ceramic powder of EP '108 and the EM of JP '086 "for the same purpose of making detergent with a reasonable expectation of success" (Office Action, page 6, lines 7-9). Applicant respectfully submits, however, that this assertion is incorrect.

Attached hereto is the Rule 132 Declaration of Mr. Teruo Higa. As explained in Sections 6-12 of the attached Declaration, the objective of EP '108 is to provide waste water, after washing with soap, with a positive water-cleaning action using pineapple enzymes. The specific process of EP '108 includes mixing porous materials (comprising a ceramic powder) with pineapple juice, fermenting the mixture concurrently, and mixing the fermented porous materials holding the pineapple enzymes and soap itself in a process of producing soap. Essentially, EP '108 describes a detergent composition formed simply by mixing a completed soap and processed porous materials. Applicant respectfully submits that one skilled in the art would not have had any logical reason to use EM, based on JP '086, in the detergent composition of EP '108. As explained above and in Section 10 of the attached Declaration, EP '108 does not disclose or suggest anything regarding enhancing the efficiency of the soap itself by mixing a ceramic powder with a soap raw material.

Further, Applicant respectfully submits that the additional microorganisms disclosed in JP '086 are not disclosed or suggested in connection with the fermentation process described in EP '108, and would not have been expected to provide any benefits to the fermentation process of EP '108. There would be no need to add additional EM to EP '108 since no benefits would have been expected in the context of the fermentation process of EP '108.

The PTO also admitted that even if, *arguendo*, EP '108 and JP '086 were combined in the manner asserted above, the resultant combination still fails to disclose or suggest EM specifically including lactic acid based bacteria, yeast and photosynthetic bacteria. In an attempt to overcome this admitted deficiency of EP '108 and JP '086, the Examiner applied Higa asserted that the claimed EM materials are inherent (see Office Action, page 7, lines 1-4).

Applicant respectfully submits, however, that the claimed EM materials would not necessarily be present in the EM disclosed in JP '086, as explained in Section 12 of the attached Declaration. That is, one skilled in the art would not have had any logical expectation that the EM in JP '086 would necessarily include lactic acid bacteria, yeast and photosynthetic bacteria, based on Higa. The invention disclosed in JP '086 is a method for proliferating EM on a porous material by improving the conditions of the porous material as a colony for the EM, and there is no disclosure or suggestion that the EM is or could be used in connection with a detergent.

Notwithstanding the above, the PTO admitted that even if, *arguendo*, EP '108, JP '086 and Higa were combined in such a manner, the resultant combination would still fail to disclose or suggest a ceramic powder comprising a condensed liquid of an antioxidant substance produced by EM. In an attempt to overcome this deficiency, the PTO applied JP '144, and asserted that it would have been obvious to one skilled in the art to substitute the ceramic powder used in the detergent composition of EP '108 (as modified above based on JP '086 and Higa) with the EM-X ceramic of JP '144 as "an art-recognized alternative" because the EM-X ceramic is considered to be the same ceramic used for the method of EP '108, and also EM can be used as a detergent component as taught by JP '086, and thus one of ordinary skill in the art "would expect a reasonable success in substitution of the ceramic powder of Uyama [EP '108] with the EM-X ceramic of Sakanishi [sic., Irie, JP '144]" (Office Action, page 7, lines 11-13 and lines 15-18). Applicant respectfully submits that these assertions are technically incorrect and logically flawed.

That is, as explained in Sections 13-14 of the attached Declaration, one skilled in the art would not have had any logical reason to use EM-X, based on JP '144, instead of the ceramic powder of JP '086 in EP '108, because such a skilled artisan would not have needed to look to JP '086 in the first place, since EP '108 merely requires porous materials for delivering pineapple enzymes, such as a ceramic powder as a porous material. EP '108 does not require a functional ceramic in order to achieve its objective, and one skilled in the art would not have expected any additional benefits in using a functional ceramic instead, much less EM-X.

Moreover, JP '144 discloses that EM ceramic is formed by mixing EM · X and clay and then baking the mixture, which, contrary to the PTO's position, is not the same as an EM ceramic combined with EM-X comprising an antioxidant enzyme in the present invention. Applicant respectfully submits that EP '108 merely discloses a detergent composition formed by fermenting porous materials comprising a ceramic powder, and the Examiner has clearly misinterpreted the term "fermentation" as being the same as "adding EM (microorganisms)," which any skilled artisan would understand is not the case.

For at least the foregoing reasons Applicant respectfully submits that multiple combinations of the numerous applied references still fail to disclose or suggest each and every feature recited in new claim 7. Accordingly, Applicant respectfully submits that all claims pending herein define patentable subject matter over the applied references, and respectfully requests that the above rejection be reconsidered and withdrawn.

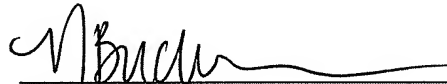
If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

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